

### ABSTRACT OF THE DISCLOSURE

Devices and methods according to the invention allow measurement of deformation of objects by installing on them one or several of lasers or other light sources and a corresponding number of arrays of photo-sensors. The light beams may  
5 be shaped so that the response of the sensors may be processed to calculate the bend and twist of the object. By positioning the lasers and sensors in sequence, a cumulative calculation of the deformation is made possible. The applications include anemometry, a variety of blades, buildings, towers and other structures where deformation needs to be measured.